REMARKS

Claims 1-25 are pending in this application. By this Amendment, claims 1-3, 5-7, 10-16, and 24 are amended. Claim 1 is amended simply to clarify the function of the voice/image communication apparatus as set forth in the specification as originally filed, and claims 2-3, 5-7 and 24 are amended to correct minor informalities and for consistency with claim 1. Further, claim 10 is amended to clarify the corresponding method step, and claims 11-16 and 24 are amended for consistency with claim 10. Thus, it is respectfully submitted that the amendments to claims 1-3, 5-7, and 10-16, and 24 do not constitute new issues. Support for the claims can be found throughout the specification, including the original claims, and the drawings. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested. Entry of the amended claims is proper under 37 C.F.R. §1.116 since the amendments: (1) place the application in condition for allowance for the reasons discussed herein; (2) do not raise any new issues requiring further search and/or consideration since the amendments amplify issues previously discussed throughout prosecution without incorporating additional subject matter; (3) satisfy a requirement of form asserted in the previous Office Action; and/or (4) place the application in better form for appeal, if necessary. Entry is thus requested.

The Office Action rejects claims 1-4, 6-8, 19-22, and 24-25 under 35 U.S.C. §103(a) over Irube et al., U.S. Patent Publication No. 2001/0041586 (hereinafter "Irube") in view of U.S.

Patent No. 5,672,820 to Rossi et al. (hereinafter "Rossi"), and further in view of U.S. Patent No. 6,542,824 to Berstis. The rejection is respectfully traversed.

Independent claim 1 recites, *inter alia*, a direction sensor configured to detect compass orientation direction data associated with a photographing object, a voice/image communication apparatus configured to multiplex or demultiplex the direction data and at least one of converted voice and image data, and a display module configured to display demultiplexed image and direction data from the voice/image communication apparatus, wherein the direction data is displayed within the image which is captured by the apparatus and displayed by the display module. Independent claim 19 recites, *inter alia*, multiplexing the encoded compass orientation direction data binary value together with image and voice data forming an image frame, and transmitting the image frame to a base station, wherein the image frame includes the compass orientation direction data as part of the image to be displayed. Irube neither discloses nor suggests such features.

More specifically, as acknowledged by the Examiner in the remarks regarding independent claims 1 and 19, the camera direction sensor unit 28 disclosed by Irube merely senses the presence of a camera unit 4, i.e., whether or not the camera unit 4 is actually attached to the terminal 1 or not. Irube neither discloses nor suggests that the camera direction sensor unit 28 is configured to detect a compass orientation direction of a photographing object. The Examiner asserts that Irube discloses two multiplexer/demultiplexers 17 and 20 which would

multiplex/demultiplex voice, video, and direction or other data. However, Irube clearly discloses that the multiplexer/demultiplexer 17 has a multimedia communication mode, a voice communication mode, and a data communication mode (see paragraphs 41-44 of Irube), and that the second multiplexer/demultiplexer 20 multiplexes and demultiplexes encoded voice data between the codec 23 and the controller 11 (see paragraph 45 of Irube). Thus, even if the sensor unit 28 were capable of supplying direction data, Irube neither discloses nor suggests that either of the multiplexer/demultiplexers 17,20 are capable of multiplexing/demultiplexing direction data and at least one of converted voice and image data, as recited in independent claim 1, nor the corresponding method steps recited in independent claim 19. Further, Irube neither discloses nor suggests a display module configured to display such multiplexed image and direction data within the image captured by the apparatus and displayed on the display module, as recited in independent claim 1, nor that an image frame which includes compass orientation direction data is transmitted to a base station for display, as recited in independent claim 19.

Further, Rossi fails to overcome the deficiencies of Irube. More specifically, Rossi discloses an object location identification system 10, including a receiving module (RM) 12 which receives information related to a user's location and outputs corresponding latitude, longitude, and altitude data, and an angular measuring system (AMS) 14 connected to a pointing device 16 to measure an orientation of the device 16 and output corresponding heading and depression angle data. However, Rossi neither discloses nor suggests that any of the

components of the system 10 are configured to multiplex or demultiplex direction data and at least one of converted voice and image data, nor does Rossi disclose or suggest a display module configured to display any **such demultiplexed** data, as recited in independent claim 1, nor the corresponding method steps recited in independent claim 19.

Still further, Berstis fails to overcome the deficiencies of Irube and Rossi. More specifically, Berstis discloses a system in which a portable electronic device 10 uses inertial sensors 16 to sense movement of the device 10 relative to a stored reference position. When an object is photographed and a corresponding image frame is stored, the system may also record a position related to that frame based on a reading by the inertial sensors 16 and a comparison to the stored reference position. However, this position is merely a position of the photographed object relative to the stored position of the device 10, and not necessarily of the object itself.

The Examiner asserts, in the response to Applicant's arguments, that Berstis discloses displaying cardinal compass points and compass directions on an LCD 28 of the device 10. However, these cardinal compass points still only reflect a position of the object relative to a current position of the digital camera 10 (see column 6, lines 51-57 of Berstis), i.e., a direction in which the digital camera 10 is pointed. Berstis neither discloses nor suggests that the compass points reflect an orientation direction of a photographing object, which may include, for example, specific GPS type data, as recited in independent claim 1, nor that any such direction

data is multiplexed with at least one of converted voice and image data, as recited in independent claims 1 and 19.

Additionally, it is respectfully submitted that there would have been no motivation to combine the Irube, Rossi, and Berstis references in the manner suggested in the Office Action to arrive at the apparatus as recited in independent claim 1, and the method recited in independent claim 19. Rather, the piecemeal reconstruction of the invention through the combination of the Irube, Rossi, and Berstis references relies on impermissible hindsight gleaned from Applicant's own disclosure.

For at least these reasons, it is respectfully submitted that independent claims 1 and 19 are allowable over the applied combination, and thus the rejection of independent claims 1 and 19 under 35 U.S.C. §103(a) over Irube, Rossi, and Berstis should be withdrawn. Dependent claims 2-4, 6-8, 20-22, and 24-25 are allowable at least for the reasons set forth above with respect to independent claims 1 and 19, from which they respectively depend, as well as for their added features.

The Office Action rejects claims 5, 10, and 12-18 under 35 U.S.C. §103(a) over Irube, Rossi, and Berstis in view of U.S. Patent No. 6,236,940 to Rudow et al. (hereinafter "Rudow"). The rejection is respectfully traversed.

Independent claim 10 recites demultiplexing an image frame received from a multiplexing processing unit and separating the image frame into image, voice, and compass orientation

direction data, and displaying the separated image and compass orientation direction data on a screen of a display, wherein the compass orientation data is displayed within the image on the screen of the display. As set forth above, Irube, Rossi, and Berstis, either alone or in combination, neither disclose nor suggest such features. Further, Rudow fails to overcome the deficiencies of Irube, Rossi, and Berstis.

More specifically, the position of the golf cart and distance to the hole displayed by Rudow's device is displayed adjacent a fixed course map, and outside of the image of the hole shown on the display. Rudow neither discloses nor suggests displaying any type of direction data, let alone compass orientation data, within the image on the display, as recited in independent claim 10.

Additionally, it is respectfully submitted that there would have been no motivation to combine the Irube, Rossi, Berstis, and Rudow references in the manner suggested in the Office Action to arrive at the method as recited in independent claim 10. Rather, the piecemeal reconstruction of the invention through the combination of the Irube, Rossi, Berstis, and Rudow references relies on impermissible hindsight gleaned from applicant's own disclosure.

For at least these reasons, it is respectfully submitted that independent claim 10 is allowable over the applied combination, and thus the rejection of independent claim 10 under 35 U.S.C. §103(a) over Irube, Rossi, Berstis, and Rudow should be withdrawn. Dependent claims

12-18 are allowable at least for the reasons set forth above with respect to independent claim 10, from which they respectively depend, as well as for their added features.

Dependent claim 5 is allowable over Irube, Rossi, and Berstis at least for the reasons set forth above with respect to independent claim 1, from which it depends, as well as for its added features. Further, as set forth above, Rudow fails to overcome the deficiencies of Irube, Rossi, and Berstis. Accordingly, it is respectfully submitted that claim 5 is allowable over the applied combination, and thus the rejection of claim 5 under 35 U.S.C. §103(a) over Irube, Rossi, Berstis, and Rudow should be withdrawn.

The Office Action rejects claims 9, 11, and 23 under 35 U.S.C. §103(a) over Irube, Rossi, and Berstis in view of U.S. Patent No. 6,516,094 to Takahashi et al. (hereinafter "Takahashi"). The rejection is respectfully traversed.

Dependent claims 9, 11, and 23 are allowable over Irube, Rossi, and Berstis at least for the reasons set forth above with respect to independent claims 1, 10, and 19, from which they respectively depend, as well as for their added features. Further, Takahashi is merely cited as allegedly teaching the formation of null data, and thus fails to overcome the deficiencies of Irube, Rossi, and Berstis. Accordingly, it is respectfully submitted that claims 9, 11, and 23 are allowable over the applied combination, and thus the rejection of claims 9, 11, and 23 under 35 U.S.C. §103(a) over Irube, Rossi, Berstis, and Takahashi should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned, **JOANNA K. MASON**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP

Carol L. Druzbick
Registration No. 40,287
Joanna K. Mason
Registration No. 56,408

P.O. Box 221200
Chantilly, Virginia 20153-1200
703 766-3701 DYK:CLD:JKM/ah
Date: December 9, 2005
Q:\Documents\2000-244\79989

Please direct all correspondence to Customer Number 34610